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ABSTRACT

This paper discusses some of the problems involved in the testing of minority group children, focusing on the testing of bilingual minorities and emphasizing the special problems involved in testing Hispanic children. Considered are a variety of ways in which tests have been misused and misinterpreted in working with these children. It is suggested that even tests designed specifically for bilingual children are generally inadequate in design and interpretation. In addition to describing these testing deficiencies, the paper presents a discussion of ways to improve the use of existing testing instruments with Hispanic children and illustrates alternate methods of developing tests for use with minority groups. (BD)

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Adapting Assessment Procedures to Specific Population Characteristics: The Chicano Child

by

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INTRODUCTION

Perhaps the most antipathetic uses of tests on minority populations in recent times is seen in Jensen's (1969) review of the literature and in some of his later papers. While most of his studies have focused on Black Americans, the issues they have raised about the fundamentally heritable nature of intelligence have spilled over to adversely affect attitudes toward educational programs for other non-dominant ethnic groups who traditionally score below dominant group averages on tests of general intelligence, scholastic or vocational aptitude, and academic achievement. Central to the neohereditarian position is the belief in the inherent ability of testing instruments to measure the trait or construct in question validly for all populations.

Jensen, however, sparked something besides a fiery regression to the nature-nurture controversy--a theoretical perspective which, though intuitively attractive, has, in my opinion, not been particularly productive in our understanding or control of human behavior since first articulated by the ancient Greeks over 2,000 years ago. Jensen's problematic views also stirred some psychologists--notably minority psychologists -- to possibly find alternative explanations to the phenomenon of depressed test scores among some minority groups, explanations which would not have to assume as much as Jensen's: They have come to believe that there is something about the tests themselves or the testing situation which affects how minority youngsters perform, on the average.

The resultant controversies--both in the courts and on the scholarly battlefields of publication--to abolish, or somehow modify tests and testing are familiar to us. They are exemplified by Williams (1971), Cleary

Humphreys, Kendrick & Wesman (1975), and Bernal (1975), and summarized by Laosa (1976) and Oakland & Laosa (1976). The point for this paper is that the study of the Chicano child in testing brings yet another important set of variables into the equation, variables which may be generally classified under bilingualism.

Sánchez (1932) first documented instances of what may now be called test misuse and test abuse with Spanish-speaking populations. Numerous test-related studies on the Chicano population have been conducted since then, of course, but it was not until 39 years after Sanchez' first article on this subject that SES and language factors were simultaneously introduced in empirical studies of test performance of Chicano students (Bernal, 1971; Mercer, Note 5). Important interdependent characteristics of the Chicano population which affect their performance on tests are SES, proficiency in tha language of the test, test wiseness, test motivation, and degree of acculturation (De Avila & Havassy, 1974; Garcia & Zimmerman, 1972; Zirkel, 1972). Examiner ethnicity also seems to be a factor (Matluck & Mace, 1973).

Currently, bilingual language assessment (and subsequent prescription or placement) is probably the most important topic for bilingual education and English-as-a-second-language programs, judging by the in-service activities being provided to school districts by the various General Assistance Centers and Training Resource Centers and by the burgeoning increases in the design and sale of bilingual tests. This plethora of instruments, however, has not been an unqualified blessing, for many of them embody some fundamental misunderstandings of bilingualism, lack psychometric sophistication, or employ some of the malpractices perpetrated by more traditional measures.

Indeed, the consequences of the linguistic, cultural, and socio-economic characteristics of the Chicano child on the testing industry and the practitioner are the topics of this paper.

MALPRACTICES

Chicanos and other Hispanics have become victims of test abuse and test misuse because (1) they mave not been adequately represented in the samples of students used for test development (Green, 1972), (2) their language characteristics and lack of test sophistication have not been taken into account in research and evaluation designs or in individual test interpretation and educational decision making, and (3) test results have too often been of little practical value, and staff knowledge of test scores has produced a criterion bias in school settings (De Avila & Havassy, 1974). Furthermore, whereas IQ and related tests have served to misdiagnose disproportionately large numbers of Chicano children into mentally retarded or language and learning disability categories (Gerry, 1973; Mercer, 1976), these instruments have not been especially helpful in identifying children at the other end of the ability spectrum, the gifted (Bernal & Reyna, Note 2).

Although a few testing companies have in recent years been making progress in meeting some of these testing problems (c.f., Fitzgibbon, ca. 1973) and developing more valid tests for minority groups, psychologists in the field of measurement and test developers have generally not dealt with these issues and have not sought to impact those aspects of test misuse which are under their control or influence (Bernal, 1975). Instead, those that have articulated on the issues have either shifted the blame to the practitioner (c.f., Cleary et. al., 1975) or, arguing that tests have sufficient validity

for some purposes (often predictive validity), have been satisfied to indicate that test scores merely describe the parameters of the problem, but do not create it (c.f., Jacobson, 1977).

Still, legal and social pressures and, I suspect, a haunting, if vague dissatisfaction with a seemingly endless litany of apologias has caused test developers and psychometrists to take steps to rectify abuses and misuses in the field. Unfortunately, the measures undertaken have frequently been the source of new problems while not really ameliorating the basic condition.

The first malpractice consists of "adding points" to obtained scores of Chicano students. This procedure is, of course, basically a way of making low test scores more palpable, since it does nothing to increase a test's validity. Sometimes the number of points to be added is subjectively but experientially determined; in other instances the number is based on the average difference between Anglo and Chicano scores--a very questionable practice indeed, especially when applied to individuals. The method is wrong but the notive for adding points is often that educators working with Chicano children sometimes find that many of them have achieved or are capable of more than the test scores indicate. Doubtlessly one of the reasons why various national and state educational organizations have not been friendly to the use of certain types of tests, especially with minority populations, is that too many teachers don't believe their results.

A second malpractice involves simple renorming, i.e., the computation of ethnic norms, often locally. Renorming accomplishes what adding points does, but the numbers are determined empirically.

The only real advantage of renorming, however, is that it provides good descriptive statistics for a particular ethnic population and a better distribution of scores. But renorming appears to the uninitiated to do more, to somehow make the test better. It does not.

Test translation without tryout and subsequent modification and validation has also become a popular practice, whether done by a testing company or locally by a practitioner. Sometimes only the directions are translated, but often the entire test is recast into Spanish. I have even seen individually administered tests presented in both languages, a procedure which involves the repetition of each item! Some testing companies' brochures illustrate English and translated Spanish versions of a test in a way which suggests that they are paralled forms, when in fact no empirical verification or equating technique has been attempted, not even back translation, a technique which has proven so useful in equating the meanings of statements in cross-cultural research (Manaster & Havighurst, 1972). In fact, some translated, multiple choice tests are so "parallel" that even the position of the correct response is unchanged--a measurement travesty when one considers that both versions are sometimes administered to the same students in quick succession.

The psychometric and practical problems with test translation are many. Obviously some types of tests, such as simple psychomotor or discrimination tasks or straightforward computation problems, can usually be presented in another language with little adaptation, particularly so when no reading is required of the examinee. Even here, however, cultural content should be checked and tests be back translated, whenever appropriate, and submitted to a trial phase. But vocabulary tests or problem solving tasks involving

cultural content or internal verbal mediation cannot be simply translated (Anastasi, 1976) without risking the alteration of item characteristics or the factor structure of the tests. Again, some translated tests have no norms for the Spanish version; tests users are left to assume that the English norms are applicable.

Most often tests translated into Spanish use a relatively formal standard dialect, to produce expeditiously a test which will appeal to as wide a group of potential customers as possible. Is it not then understandable why such tests are said by critics to be insensitive to the dialectal diversity of Hispanic populations? The result, tragically, is that some Hispanics, particularly those who have not had sufficient bilingual education, score low on tests in both languages. In still other cases (fortunately few, in my experience) all Spanish surnamed children entering school for the first time are tested exclusively in Spanish, thereby penalizing those who are most proficient in English, a special case of test misuse which once again places Hispanics in a disadvantaged situation.

A related historical malpractice is test importation. Fortunately not much of this goes on any longer. For years, however, certain tests, particularly Spanish IQ tests, were imported from other countries or from Puerto Rico. Ironically, almost all of these imports were originally developed in English and then translated and adapted for other cultures. When these tests are used on Chicano children, the results are similar to those obtained on translated tests.

The last malpractice to be discussed is the administration of selected subscales of larger diagnostic and intelligence tests to Chicano students. If this practice were based on empirical findings of greater reliability or validity for certain subtests, there would be little reason to object; how-

ever, this practice is usually based on the belief that Chicanos score higher on some subscales than on others. Performance subscales, for example are often preferred by practitioners over verbal scales, in spite of the fact that basing general interpretations on performance tests has usually yielded disappointing results, both for the Anglo population (Nunnally, 1959) and for different cultural and national groups (Anastasi, 1976; Ortar, 1963). As a rule, then, the decision to administer only certain subtests to Chicanos should be based on studies which incorporate relevant linguistic and ethnographic variables in their designs.

All of these malpractices have come about because of one simple fact, often intuited but rarely admitted: there are precious few inherently valid tests to use with Chicano and other Hispanic students. The prescription is also simple, or at least straightforward: develop tests--from scratch, where necessary--which adequately measure constructs of interest in these populations.

Because of the exigencies which attend certain kinds of testing (e.g, tests for young children), it can be argued that some tests should be designed or adapted for specific or related non-dominant ethnic groups (e.g., for Chicanos or for the Spanish speaking). Tests intended for use with only one group, however, have so far been characterized by somewhat inadequate developmental procedures and parochial content.

If related ethnic groups are to be tested with the same instrument, these groups must be represented in both the tryout sample and in the norming population, and interethnic comparisons should be made as part of the item analysis and reliability checks, as well as in whatever validity studies are attempted.

In other instances (e.g., general achievement tests for adolescents), such focused test development efforts may not be practical or desirable. It is imperative, however, that minority population be included in all phases of test development, not just in the norming phase, because they can significantly affect the final composition of the test (Green, 1972).

Thus an aspect of valid test use is now gaining attention, test appropriateness (C.F. Silverman, Noa, & Russell, 1976). Valid test use assumes that the examinee(s) to be tested are not unlike the group(s) on which the test was developed and standardized; to the extent that important psychological differences exist (such as in cultural background and language), test results must be interpreted with caution and supplemental validations of the trait or construct in question should be utitized.

TECHNIQUES FOR REDUCING ERROR VARIANCE AND INCREASING SCORES

Bernal (1971) summarized and utilized a number of techniques for motivating Black and Chicano students to engage the testing task and enhance their scores on tests of higher-order cognitive operations:

1. Language screening -- to eliminate students who do not possess the minimum language skills to understand the test items.
2. Examiner-examinee matching by language and ethnicity.
3. Rapport building, including the use of the language dialect spoken by the students in informal settings, and an explanation of the purpose of the test.
4. Administering group tests in small, easily supervised groups.
5. Coaching on the mechanics of test taking, guessing, etc.

6. Explaining the testing directions thoroughly in the language dialect of the students and encouraging questions to clarify points.
7. Warmup, including practice on items similar to those to be encountered on the test or subtest, group discussion of why each member selected a particular response, and feedback.

In Bernal's study the experimental groups of Chicanos and Blacks (those to whom these techniques were applied) not only outstripped their controls (under standard test administration) but also did not differ significantly from their Anglo counterparts. SES effects obtained as one might predict. Interestingly, the Anglos in the experimental group performed essentially the same as Anglos in the control group. To date, however, no research has studied the relative efficacy of these techniques, compared singly or in their various combinations.

The point to be made is that familiar sets of test directions and testing conditions, although usually adequate for Anglos, do not optimally prepare or predispose many minority students to take tests. This is especially important in tests of maximum performance, where such sources of extraneous (error) variance are assumed to be controlled. There are recorded instances of low SES and minority students speeding through standardized examinations and marking answers seemingly at random (Anastasi & Cordova, 1953), as if to shorten the period of discomfort (Anastasi, 1976). There are also known instances of Chicano students scoring below chance on multiple choice tests of general educational achievement (De Avila, Note 3).

Given the relative absence of respsonsive test development vis-a-vis minority groups, on the one hand, and the problems which attend the lack of objectivity in judgments about individuals which a moratorium on testing would almost certainly bring about (Cleary, et al.), on the other, we might at least encourage psychometrists and educators to teach minority students how to take tests. As things now stand one must seriously question the accuracy of test-based data on Black and Hispanic persons, be these data presented on individuals or in the aggregate. Even the results of carefully designed and executed studies (e.g., National Assessment of Educational Progress, 1977) probably exaggerate group differences between Anglos and Hispanics.

Language Unintelligibility Myths Among Diverse Hispanic Populations

I believe that the difficulties which all three of the major Hispanic groups in the United States (Chicanos, Puerto Ricans, and Cuban Americans) have encountered with tests translated into standard Spanish and with the misuse of ethnic-specific tests have given rise to the belief among some educators that each Hispanic group needs tests of its own. Furthermore, since Hispanics continue to borrow elements from the English langauge with successive generations and engage in various degrees of code-switching (or language "mixing"), some hold to the proposition that neither "pure" English nor "pure" Spanish is adequate to the testing task.

While the definitive study remains to be done, the evidence in hand (Hardy, Note 4) suggests that neither of these suppositions is correct, at least not for young Hispanic children (ages four to six) being tested in a supportive or facilitative environment with instruments developed through an R & D process, such as that suggested earlier.

Issues of Language Dominance, Language Proficiency

As implied earlier the linguistic circumstances which attend the Chicano situation have not only psychometic implications but also pedagogical and quasi-legal utility. The two constucts which have the greatest sway are language proficiency and language dominance.

Language proficiency utilizes criterion-referenced, norm-referenced, or a combination of both techniques (c.f.,Burt,Dalay, & Hernandez, 1975) to establish the level of an examinee's language mastery, and it can be measured through interview techniques or paper-and-pencil tests, depending on the

aspects of language (productive or receptive skills) one wishes to define as appropriate to a particular age/grade level or to a specified role/situation (such as the proficiency required for a bilingual teacher). Tests of language proficiency, unlike popular measures of vocabulary and reading, emphasize aspects of linguistic competence.

Language dominance is a construct properly reserved for the potential, nascent, or functioning bilingual. It may be defined operationally as the higher of two language proficiency levels. However, it must be noted that the literature explaining the psychometric properties of language dominance is small, the work of Burt, Dulay, and Hernandez (1975) being a welcome exception.

There is nevertheless a great demand for measures of language dominance, particularly for Hispanics, from early childhood through the early elementary years. Bilingual education and English-as-a-Second-Language programs variously use language dominance appraisals to accept children, place them in instructional groupings, assess their language progress, evaluate certain aspects of curricula, and in the case of transitional bilingual education, to determine the appropriate point at which a student is ready to exit the bilingual program and enter the English monolingual course of instruction ordinarily offered in the schools.

Indeed federal and state legislation has established bilingual programs which are essentially transitional in nature, targeted for children who are of limited English speaking ability (LESA). This characteristic is amenable to objective measurement in terms of English proficiency. However, the rules and regulations (Department of Health, Education, and Welfare, 1976) pertaining to HEW's Office of Bilingual Education (ESEA Title VII) have set out several

definitions treating a student's national origin, native language, language environment, language dominance, or ability to speak and understand instruction in English. Defined legally in this fashion, LESA can be established in a variety of more or less accurate ways which could yield disparate results on the same individuals.

One consequence of this is that langauge tests have been pressed into service to determine LESA, although extant instruments do not measure this construct per se. The operationalization of LESA, then, is left entirely to the test user. This stepped-up usage of language assessment tests has resulted in new tests being introduced, many of which have shortcomings which are not readily noted by educators.

Some language dominance tests, for example, do not sample the receptive and productive domains of the two languages adequately, do not cover a broad enough range of syntactic structures, or rely excessively on vocabulary-related skills. Most of these measures, furthermore, utilize neither validated criteria nor standard scores for their operational definitions of language dominance; instead, the comparative determination of language dominance is based on raw scores, and no assessment of individual language proficiency need be made.

Language dominance assessments made without an examination of language proficiency have, in my opinion, fostered two related and tacitly held beliefs which desensitize educators to individual differences. One is that children cannot be proficient in the language in which they are not dominant; the other is that children must be competent in their dominant language. Some bilingual children--like some monolinguals--really do have a language dysfunction, and this would affect their language competence even in their dominant language.

Normal and certainly gifted (Bernal, 1974) children acquire two language systems readily, although they may still be more proficient in one of them.

So the picture is bleak. Even tests developed explicitly to measure important school-related variables for Chicanos or other Hispanic groups are generally of poor quality. In my opinion only three testing companies have to date made professionally worthy efforts in language assessment for Hispanics.

CIRCO: An Example of Relevant Test Adaptation and Development

CIRCO is a test design effort targeted for four to six year-old Spanish-speaking children which is sponsored by ETS and funded by the Administration for Children, Youth, and Families. Based on the philosophy and development of CIRCUS, the new CIRCO series will consist of 10 major tests which parallel some of the areas tested by CIRCUS, which consists of 14 direct child measures (Hardy, Note 4). The areas tested include quantitative concepts, memory, problem solving skills, general readiness (such as copying skills and visual and auditory discrimination), and receptive and productive language proficiency in English and Spanish, utilizing both paper-and-pencil and structured interview techniques.

ETS has involved nationally recognized Hispanic and Anglo consultants in every planning and development phase of the project, and has retained a tri-ethnic Cultural Advisory Committee. All CIRCO tests, furthermore, have been pilot and field tested on groups of Cuban American, Puerto Rican, and Chicano children of different SES, including Head Start-eligible children. Norming samples have been drawn principally from the Southeast, Northeast, Midwest, and Southwest. Item and test analyses follow this geographic breakdown.

CIRCO, like CIRCUS, includes sets of practice materials and can be administered individually or in small groups. The test will provide teachers with descriptive and quasi-prescriptive statements as well as scores. Very importantly, the test is designed to enhance meaningful teacher-student interaction in a structured, educationally relevant situation (Anderson, Note 1).

CIRCO also includes a screening test, a unique feature in the assessment of Spanish-speaking children. It operationally defines the set of youngsters who may be appropriately tested with the battery. If a child does not achieve an empirically determined minimal score (Hardy, Note 4) on this screening test, CIRCO is not appropriate because the child does not comprehend or speak enough Spanish. In this fashion, too, the norms will become more meaningful to the test user, and individual profiles of ability can be judged in the context of at least minimal receptive and productive language proficiency levels.

Finally, CIRCO will ambitiously attempt to define not only language dominance but also LESA, although the process for doing so has not yet been decided upon.

Conclusion

The ongoing CIRCO project is proof of this writer's (Bernal, 1975) contention that psychometrics has the necessary armamentarium to produce valid tests for non-dominant ethnic populations in a variety of areas. All the profession needs is a commitment to learn from experience and to not settle for less than first-rate efforts. If anything, the search for valid approaches to testing the bilingual child is giving us some new perspectives on established test development procedures as well as on minority testing issues,

perspectives which, I trust, will ultimately work to the betterment of theoretical and applied psychological measurement.

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